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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/609,021

06/30/2000

Ronald Reiger

ATTW01 -00098

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12/06/2005

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EXAMINER

NGUYEN, DAVID Q

ART UNIT

PAPER NUMBER

2681

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/609,021

Applicant(s)

REIGER ET AL.

Examiner

David Q. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 09/22/05 have been fully considered but they are not persuasive.

In response to Applicants' Remarks, Applicants argue: Egner is not directed to a wireless local loop, and that phrase does not appear anywhere within Egner. Furthermore, Egner does not disclose that remote units are assigned to receive communication from an associated station, as recited in claim 1.

Examiner disagrees. As defined by applicants in the abstract and independent claims, the wireless local loop has a plurality of stations which are each associated with a plurality of the remote units, each plurality of remote units assigned to receive communication service from the association station. Egner shows in fig. 2 a wireless local loop having a plurality of stations (214 in fig. 2) which are each associated with a plurality of the remote units (212, 216 and 218). Fig. 2 of Egner also shows that the remote unit 212 is assigned to receive communication from the associated station 214, or the remote unit 216 and 218 are assigned to receive communication from the associated station in cell 204. Therefore, Egner discloses a fixed wireless loop network having a plurality of stations which are each associated with a plurality of remote units, each plurality of remote units assigned to received communication service from the associated station, as recited in claim 1.

Applicants also argue that Park does not disclose comparing communication service load data associated with one or more stations to a communication load criteria to identify a potentially overload station.

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Examiner disagrees. Park clearly teaches: "When the load of the cell in the first layer is detected to have level 88 to be considered as an overload cell" ((see col. 4, lines 17-18). It is apparent that Park discloses comparing communication service load data associated with one or more stations to a communication load criteria to identify a potentially overload station.

Applicants also argue that Park does not disclose reducing the number of remote units assigned to receive communication service from the potentially overload station.

Examiner disagrees. Park clearly teaches: "When a particular is detected to be in the overload condition, a cell group with the condition of minimum load of adjacent cells with neighboring cells around the overload cell in the center is retrieved and then a cell radius of the cell group found as result of retrieval is expanded using the forward power control of the corresponding central cell so that subscriber call within the overload cell in the vicinity of the neighboring cell in handed off to the expanded cell (see col. 3, lines 33-40). Therefore, Park discloses reducing the number of remote units assigned to receive communication service from the potentially overload station.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 5-6, 8-23, 25, 27-28, and 30-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egner et al. (US Patent Number 6223041) in view of Park et al. (US Patent Number 5912884)

Regarding claim 1, Egner et al discloses a method of allocating resources in a network comprising accessing data from a fixed wireless loop network having a plurality of stations which are each associated with a plurality of remote units, each plurality of remote units assigned to received communication service from the associated station (see fig. 2; abstract; col. 2, lines 38-67; col. 4, lines 48-67 and explanation in Response to Arguments above). Egner et al is silent to disclose comparing communication service load data associated with one or more stations to a communications load criteria to identify a potentially overloaded station; reducing the number of remote units assigned to receive communication service from potentially overloaded station. However, Park et al. disclose comparing communication service load data associated with one or more stations to a communications load criteria to identify a potentially overloaded station; reducing the number of remote units assigned to receive communication service from potentially overloaded station (see fig. 2, 3, 4, col. 3, lines 8-66; col. 4, lines 1-67; col. 5, lines 1-54 and explanation in Response to Arguments above). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Park to Egner et al in order to avoid blocking calls in the system.

Regarding claim 23, Egner et al. disclose a signal bearing medium including machine readable instructions executable by a processing apparatus to perform a method of allocating resources in a network, the method comprising: accessing data from a fixed wireless loop network having a plurality of stations which are each associated with a plurality of remote units, each plurality of remote units assigned to received communication service from the associated station (see abstract; fig. 2 and fig. 8). Egner et al. are silent to disclose comparing communication service load data associated with one or more stations to a communications load

criteria to identify a potentially overloaded station; reducing the number of remote units assigned to receive communication service from potentially overloaded station, comparing communication service load data from one or more stations to a communications load criteria to identify a potentially overloaded station; reducing the number of remote units receiving communication service from potentially overloaded station. However, Park et al. disclose comparing communication service load data associated with one or more stations to a communications load criteria to identify a potentially overloaded station; reducing the number of remote units assigned to receive communication service from potentially overloaded station, comparing communication service load data from one or more stations to a communications load criteria to identify a potentially overloaded station; reducing the number of remote units receiving communication service from potentially overloaded station(see fig. 2, 3, 4; col. 3, lines 8-66; col. 4, lines 1-67; col. 5, lines 1-54). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Park to Egner in order to avoid blocking calls in the system.

Regarding claims 3 and 25, Egner et al discloses a method of allocating resources in a network modified by Park et al. comprising all of the limitations as claimed above. Park et al. also disclose a fixed wireless loop network includes data from a service area plot (see fig. 2, 3A-3B, 4; col. 3, lines 8-66; col. 4, lines 1-67; col. 5, lines 1-54). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Park to Egner et al in order to use coverage data to balance load in the system.

Regarding claims 5 and 27, Egner et al discloses a method of allocating resources in a network modified by Park et al. comprising all of the limitations as claimed above. Park et al.

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also disclose wherein the service area plot is a corrected service area plot (see fig. 2, 3A-3B, 4; col. 3, lines 8-66; col. 4, lines 1-67; col. 5, lines 1-54). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Park to Egner et al in order to use coverage data to balance load in the system.

Regarding claims 6 and 28, Egner et al discloses a method of allocating resources in a network modified by Park et al. comprising all of the limitations as claimed above. Park et al. also disclose wherein the service area plot is a best server plot (see fig. 2, 3A-3B, 4; col. 3, lines 8-66; col. 4, lines 1-67; col. 5, lines 1-54). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Park to Egner et al in order to improve the system and avoid blocking calls.

Regarding claims 8, 12, 30, and 34, Egner et al discloses a method of allocating resources in a network modified by Park et al. comprising all of the limitations as claimed above. Park et al. also disclose wherein the service area plot is divided into bins and wherein the communication service load threshold is the communication service capacity of the potentially overloaded station (see fig. 2, 3A-3B, 4; col. 3, lines 8-66; col. 4, lines 1-67; col. 5, lines 1-54). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Park to Egner et al in order to improve the system and avoid blocking calls.

Regarding claims 9-10 and 31-32, Egner et al discloses a method of allocating resources in a network modified by Park et al. comprising all of the limitations as claimed above. Egner et al. further disclose communication service load data includes a level of communication service load projected for a future date; and communication service load data includes an approximate

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level of communication service for a peak usage time (see abstract; see col. 2, lines 13-63; col. 3, lines 35-67; col. 4, lines 1-67; col. 5, lines 1-67; col. 6, lines 1-67; col. 7, lines 1-67; col. 8, lines 1-67).

Regarding claims 11 and 33, Egner et al discloses a method of allocating resources in a network modified by Park et al. comprising all of the limitations as claimed above. Park et al. also disclose wherein comparing communication service load data from one or more stations to communications load criteria includes comparing the communication service load data to a communication service load threshold (see fig. 2, 3A-3B, 4; col. 3, lines 8-66; col. 4, lines 1-67; col. 5, lines 1-54). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Park to Egner et al in order to balance load in the system.

Regarding claims 13 and 35, Egner et al discloses a method of allocating resources in a network modified by Park et al. comprising all of the limitations as claimed above. Park et al. also disclose wherein reducing the number of remote units receiving communication service from the potentially overload station includes identifying a re-assignable remote unit, the re-assignable remote unit being a remote unit assigned to receive communication service from the potentially overloaded station and capable of receiving communication service from a substitute station (see fig. 2, 3A-3B, 4; col. 3, lines 8-66; col. 4, lines 1-67; col. 5, lines 1-54). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Park to Egner et al in order to balance load in the system.

Regarding claims 14 and 36, Egner et al discloses a method of allocating resources in a network modified by Park et al. comprising all of the limitations as claimed above. Park et al.



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also disclose wherein reducing the number of remote units receiving communication service from the potentially overloaded station includes applying re-assignment criteria to the re-assignable remote unit to determine whether the re-assignable remote unit can be re-assigned to the substitute station (see fig. 2, 3A-3B, 4; col. 3, lines 8-66; col. 4, lines 1-67; col. 5, lines 1-54). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Park to Egner et al in order to balance load in the system.

Regarding claims 15 and 37, Egner et al discloses a method of allocating resources in a network modified by Park et al. comprising all of the limitations as claimed above. Park et al. also disclose wherein applying the re-assignment criteria includes determining whether re-assignable remote unit to the substitute station would cause the substitute station to become a potentially overloaded station (see fig. 2, 3A-3B, 4; col. 3, lines 8-66; col. 4, lines 1-67; col. 5, lines 1-54). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Park to Egner et al in order to balance load in the system.

Regarding claims 16-17, 19, 38-39 and 41, Egner et al discloses a method of allocating resources in a network modified by Park et al. comprising all of the limitations as claimed above. Egner et al. further discloses applying the re-assignment criteria includes comparing a strength of a signal from the substitute station against a signal strength threshold; comparing the strength of an interference signal experience by the substitute station to an interference threshold (see abstract; fig. 1A, 1B; fig. 5 and 6; col. 3, lines 35-67; col. 4, lines 1-67; col. 5, lines 1-67; col. 6, lines 1-67; col. 7, lines 1-67; col. 8, lines 1-67).

Regarding claims 18 and 40, Egner et al discloses a method of allocating resources in a network modified by Park et al. comprising all of the limitations as claimed above. Egner et al. further disclose applying the re-assignment criteria includes comparing a strength of a signal from the substitute station against a signal strength threshold and determining whether re-assigning the re-assignable remote unit to the substitute would cause the substitute station to become a potentially overloaded station (see abstract; fig. 1A, 1B; fig. 5 and 6; col. 3, lines 35-67; col. 4, lines 1-67; col. 5, lines 1-67; col. 6, lines 1-67; col. 7, lines 1-67; col. 8, lines 1-67).

Regarding claims 20 and 42, Egner et al discloses a method of allocating resources in a network modified by Park et al. comprising all of the limitations as claimed above. Egner et al. further disclose applying the re-assignment criteria includes comparing a strength of a signal from the substitute station against a signal strength threshold and determining whether re-assigning the re-assignable remote unit to the substitute would cause the substitute station to become a potentially overloaded station (see abstract; fig. 1A, 1B; fig. 5 and 6; col. 3, lines 35-67; col. 4, lines 1-67; col. 5, lines 1-67; col. 6, lines 1-67; col. 7, lines 1-67; col. 8, lines 1-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Egner to Park and Egner et al in order to improve quality of service of system.

Regarding claims 21 and 43, Egner et al discloses a method of allocating resources in a network modified by Park et al. comprising all of the limitations as claimed above. Egner et al. further disclose applying the reassignment criteria includes determining whether re-assigning the re-assignable remote unit to the substitute station would cause the substitute station to become a potentially overload station, comparing the strength of an interference signal experienced by the

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substitute station to an interference threshold, and comparing a strength of a signal from the substitute station against a signal strength threshold (see abstract; fig. 1A, 1B; fig. 5 and 6; col. 3, lines 35-67; col. 4, lines 1-67; col. 5, lines 1-67; col. 6, lines 1-67; col. 7, lines 1-67; col. 8, lines 1-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Egner to Park and Egner et al in order to improve quality of service of system.

Regarding claims 22 and 44, Egner et al discloses a method of allocating resources in a network modified by Park et al. comprising all of the limitations as claimed above. Park et al. also disclose creating a service area plot which accounts for remote units re-assigned from one station to a substitute station (see fig. 2, 3A-3B, 4; col. 3, lines 8-66; col. 4, lines 1-67; col. 5, lines 1-54). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Park to Egner et al in order to balance load in the system.

3. Claims 2, 4, 7, 24, 26, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egner et al (US Patent Number 5603085) in view of Park et al. (US Patent Number 5912884) and further in view of Gunmar et al. (US Patent Number 5293640).

Regarding claims 2 and 24, Egner et al discloses a method of allocating resources in a network modified by Park et al. comprising all of the limitations as claimed above. They fail to disclose the fixed wireless loop network is a hypothetical network. However, Gunmar et al. disclose a fixed wireless loop network is a hypothetical network (see abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

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provide the above teaching of Gunmar to Park and Egner et al in order to avoid blocking calls in the system.

Regarding claims 4 and 26, Egner et al discloses a method of allocating resources in a network modified by Park comprising all of the limitations as claimed above. They fail to disclose wherein the service area plot is a service area plot for a hypothetical network. However, Gunmar et al. also disclose wherein the service area plot is a service area plot for a hypothetical network (see abstract; fig. 8-10). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Gunmar to Park and Egner et al in order to use coverage data to predict capacity of cells.

Regarding claims 7 and 29, Egner et al discloses a method of allocating resources in a network modified by Park comprising all of the limitations as claimed above. They fail to disclose wherein the service area plot is a best interference plot. However, Gunmar et al. disclose a service area plot is a best interference plot (see abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Gunmar to Park and Egner et al in order to improve quality of service of system.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Q. Nguyen whose telephone number is 571-272-7844. The examiner can normally be reached on 8:30AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOSEPH H. FEILD can be reached on (571)272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DN

David Nguyen

  
JOSEPH FEILD  
SUPERVISORY PATENT EXAMINER